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APPLICATION NO. 09/628,532

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### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE ON APPEAL FROM THE EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

**DORBOLO** 

Serial No.:

09/628,532

Filing Date:

July 31, 2000

Group Art Unit:

2143

Examiner:

Thomas J. Mauro, Jr.

Title:

METHOD AND SYSTEM FOR REPROGRAMMING

INSTRUCTIONS FOR A SWITCH

**Mail Stop Appeal Brief - Patents** 

Commissioner for Patents

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Willie Jiles

March 14, 2005

Dear Sir:

#### APPEAL BRIEF

Appellant has appealed to this Board from the decision of the Examiner, contained in a Final Office Action mailed October 13, 2004 ("Final Office Action"), finally rejecting Claims 13-38. Appellant mailed a Notice of Appeal on January 13, 2005. Appellant respectfully submits this Appeal Brief for consideration of the Board.

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## **Real Party In Interest**

The real party in interest for this Application under appeal is Cisco Technology, Inc. of San Jose, California.

## **Related Appeals And Interferences**

The Appellant, the undersigned Attorney for Appellant, and the Assignee know of no applications on appeal that may directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

## **Status Of Claims**

Claims 1-12 were withdrawn previously. Claims 13-38 were rejected in the *Final Office Action*. Appellant presents Claims 13-38 for appeal and sets forth these claims in Appendix A.

## **Status of Amendments**

The claims on appeal and which appear in Appendix A of this Appeal Brief represent the form of the claims as of the time of the *Final Office Action*. Appellant filed no amendments to the claims after the *Final Office Action*.

### **Summary of Claimed Subject Matter**

In networks, switches interconnect elements and help enable transport of network traffic. See, e.g., Specification at Fig. 1 (illustrating integrated access devices (IADs) 14 that act as switches operating on both synchronous and asynchronous traffic). These switches typically include a number of line cards and a switch core to distribute traffic between the line cards. See, e.g., Id. at Fig 2. To protect against faults, a switch operating according to particular claimed embodiments can support rapid redirection of traffic from a failed line card to another one of the available line cards. Id. at p. 4, lines 12-23.

To provide for rapid redirection, the switch may use a redirection memory to associate a set of routing parameters with a particular line card. *Id.* In response to an event initiating activation of a second line card in place of the first line card, the redirection memory may be reprogrammed to associate the routing parameter set in the routing memory with the second line card. *Id.* The switch may then use the routing parameters to service the second line card. These techniques use minimal processor operations to effect redirection from a failed line card, and thus a switch may support rapid protection switching, potentially within the time requirements set forth for telecommunications standards. *Id.* at p. 6, lines 2-8. Moreover, these techniques can enable a switch to support N to 1 protection switching, which provides far greater flexibility and redundancy than traditional 1 to N protection switching techniques. *Id.* at p. 6, lines 9-18.

### Grounds Of Rejection To Be Reviewed On Appeal

- I. Appellant requests that the Board review the Examiner's rejection of Claims 13-15, 19-22, 28-33, and 37 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,389,024, which issued to Ghai et al. ("Ghai"), in view of U.S. Patent No. 6,256,293, which issued to Gerstel et al. ("Gerstel"), and U.S. Patent No. 6,097,515, which issued to Pomp et al. ("Pomp").
- II. Appellant requests that the Board review the Examiner's rejection of Claims 16-18, 23-25, and 34-36 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai*, *Gerstel* and *Pomp* in view of U.S. Patent No. 5,598,409, which issued to Madonna et al. ("Madonna").
- III. Appellant requests that the Board review the Examiner's rejection of Claims 26 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai* in view of U.S. Patent No. 5,721,819, which issued to Galles et al. ("*Galles*"), *Madonna*, and U.S. Patent No. 6,147,988, which issued to Bartholomew et al. ("*Bartholomew*").
- IV. Appellant requests that the Board review the Examiner's rejection of Claims 27 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai*, *Galles*, *Madonna*, and *Bartholomew* in view of *Gerstel*.
- V. Appellant requests that the Board review the Examiner's rejection of Claims 38 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai* in view of *Gerstel*, *Pomp*, *Madonna*, and *Bartholomew*.

#### Argument

# <u>I.</u> Claims 13-15, 19-22, 28-33, and 37 are patentable over *Ghai*, *Gerstel*, and *Pomp*, whether the references are taken alone or in combination.

The Examiner rejects Claims 13-15, 19-22, 28-33, and 37 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai* in view of *Gerstel* and *Pomp*. To establish a *prima facie* case of obviousness, the Examiner must satisfy three criteria. First, there must be suggestion or motivation in the prior art to modify or combine the references. Second, there must be a reasonable expectation of success. Third, the modification or combination must teach or suggest all elements of the rejected claims. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Since the proposed combination fails to teach or suggest all elements of any of the claims, Appellant first addresses the third point. Next, Appellant addresses the failure of the proposed combination with respect to the first two points.

# A. Claims 13-15, 19-22, 28-33, and 37 each include limitations not taught or suggested by *Ghai*, *Gerstel*, or *Pomp*.

As an example, consider Appellant's independent Claim 13, which recites:

A method for associating routing parameters for a switch with line cards serviced by the switch, comprising:

programming a redirection memory to associate a routing parameter set in a routing memory for a switch with a first line card, the routing parameter set including a plurality of routing parameters to be provided to the switch to service the first line card; and

in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card.

Ghai, Gerstel, and Pomp, whether taken alone or in combination, fail to teach or suggest every element of this Claim.

Among other aspects of Claim 13, the *Ghai-Gerstel-Pomp* combination fails to teach or suggest:

in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card.

The Examiner admits that *Ghai* fails to teach the recited element. *Final Office Action*, page 3. The Examiner thus attempts to combine aspects of *Gerstel* and *Pomp* to produce the recited element. However, in attempting this combination, the Examiner misinterprets the teachings of the references and overlooks aspects of the references that teach away from Appellant's claims.

The Examiner states that *Gerstel* "teaches an event initiating activation of a second line card in place of the first line card." *Final Office Action*, page 3. However, *Gerstel* proposes hardwiring various ports of different line cards together to solve the problem of failed line cards. *Gerstel*, col. 3, lines 4-42. Hardwiring ports of different line cards together to solve the problem of failed line cards fails to teach or suggest "in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card." In particular, hardwiring ports of different line cards together fails to teach or suggest "reprogramming the redirection memory."

In an attempt to cure the deficiencies of *Gerstel*, the Examiner introduces *Pomp* and states:

Pomp discloses a switchable network unit which permits automatic activation and configuration of different line cards, i.e. [sic] second line card, by the controller, which in turn causes provisioning data to be loaded to provide the necessary information the controller needs to route data to this new, i.e. [sic] second, line card.

Final Office Action, page 3. However, the Examiner's summary of Pomp highlights that reference's deficiencies with regard to teaching or suggesting the language of Claim 13.

Pomp discloses that when a customer activates an additional telephone line, an operations control center supplies two things to a controller in a switchable optical network unit: instructions and provisioning data. Pomp, col. 15, lines 38-41. The instructions identify an available line card and cause the controller to activate that line card. Id., col. 15, lines 41-43. The provisioning data includes routing information that the controller needs to route signals to and from the newly activated line card:

The provisioning data, which this controller 179 stores in memory, provides various information that the controller needs to route signals to and from the relevant line card, e.g. [sic] to control the TSI to provide routing and associated multiplexing and demultiplexing of digital signals coming from and going to the second POTS line card.

Pomp, col. 15, lines 42-48. Thus in Pomp, when a new line card is activated, the controller loads an entirely new set of routing information. However, loading an entirely new set of routing information when a new line card is activated fails to teach or suggest "in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card."

For at least these reasons, *Ghai*, *Gerstel*, and *Pomp*, whether taken alone or in combination, fail to teach or suggest every element of this Claim. For reasons analogous to those discussed with respect to Claim 13, *Ghai*, *Gerstel*, and *Pomp* fail to teach or suggest every element of Claims 20, 28, and 31. Claims 14, 15, and 19 depend from Claim 13; Claims 21 and 22 depend from Claim 20; Claims 29 and 30 depend from Claim 28; and Claims 32, 33, and 37 depend from Claim 31. Therefore, all of these claims are allowable over the proposed combination of *Ghai*, *Gerstel*, and *Pomp*. Appellant thus respectfully requests the Board to reverse the rejection and instruct the Examiner to allow Claims 13-15, 19-22, 28-33, and 37.

# B. There is no teaching, suggestion, or motivation to combine or modify the teachings of *Ghai*, *Gerstel*, or *Pomp* either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

According to the Federal Circuit, "a showing of a suggestion, teaching, or motivation . . . is an 'essential component of an obviousness holding." Brown & Williamson Tobacco Corp. v. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d 1456, 1459 (Fed. Cir. 2000) (quoting C.R. Bard, Inc., v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 U.S.P.Q.2d 1225, 1232 (Fed. Cir. 1998). Furthermore, while "evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved, . . . . [t]he range of sources available . . . does not diminish the requirement for actual evidence." In re

Dembiczak, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Thus, it is a factual question that cannot be resolved on subjective belief and unknown authority, but must be based on objective evidence of record. See In re Lee, 277 F.3d 1338, 1343-44, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Indeed, the factual inquiry whether to combine or modify references must be thorough and searching. McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d 1001, 1008 (Fed. Cir. 2001).

Appellant submits that there is no teaching, suggestion, or motivation to combine or modify the teachings of *Ghai*, *Gerstel*, and *Pomp*. *Ghai* discloses a router that is programmable to use different call routing algorithms for various calls. *See Ghai*, at col. 2, lines 40-42. While *Ghai* mentions line cards, *Ghai* in no way addresses fault protection, let alone fault protection with respect to line cards. *Gerstel*, as discussed above, discloses a system in which ports are hardwired together (which teaches away from Appellant's claims). Finally, *Pomp*, as discussed above, discloses a switchable optical network unit. Each of these three references addresses a different problem using different approaches. Appellant is unable to discern, and the Examiner has failed to provide, any evidence suggesting or motivating a combination of any of these references.

Other than bare assertions that the combination would provide advantages, the Examiner cites to only one portion of Pomp as evidence supporting the combination. *See Final Office Action*, page 3. However, the cited portion of Pomp merely states:

From the above discussion, it becomes clear that a need exists for a network architecture and/or procedures for rapid upgrades of wireline services and/or restoration of interrupted wireline services. A further need exists for such a network utilizing an advanced fiber-to-the curb type network.

*Pomp*, at col. 5, lines 42-47. This statement fails, however, to provide evidence supporting a combination of the call routing techniques of *Ghai* with the switchable optical network unit of *Pomp* and the hardwiring of line cards in *Gerstel*. Moreover, this brief statement certainly fails to provide any expectation of success for the combination of these disparate references.

Therefore, for at least these additional reasons, Appellant requests the Board to reverse the rejection and instruct the Examiner to allow Claims 13-15, 19-22, 28-33, and 37.

# II. Claims 16-18, 23-25, and 34-36 are patentable over *Ghai*, *Gerstel*, *Pomp*, and *Madonna*, whether the references are taken alone or in combination. There is no motivation for the combination.

The Examiner rejects Claims 16-18, 23-25, and 34-36 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai*, *Gerstel*, *Pomp*, and *Madonna*. Claims 16-18, 23-25, and 34-36 depend from Claims 13, 20, and 31 respectively, which are shown above to be allowable over *Ghai* in view of *Gerstel* and *Pomp*. The Examiner proposes to add *Madonna* to the combination to provide an instruction memory. The introduction of *Madonna*, however, fails to provide the elements of Appellant's Claims 13, 20, and 31 not shown by the *Ghai-Gerstel-Pomp* combination.

In addition, there is no teaching, suggestion, or motivation to combine or modify *Ghai*, *Gerstel*, *Pomp*, and *Madonna* either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. As discussed above, there is no teaching, suggestion, or motivation to combine *Ghai*, *Gerstel*, and *Pomp*. *Madonna* fails to provide any teaching, suggestion, or motivation for the combination. Further, the Examiner has not provided any such evidence. Rather, by picking and choosing elements from four different references without evidence supporting the combination, it appears that the Examiner has improperly used the inventor's disclosure as a blueprint for piecing together the references, the essence of hindsight reconstruction.

Thus, for at least these reasons, Appellant requests the Board to reverse the rejection and instruct the Examiner to allow Claims 16-18, 23-25, and 34-36.

# III. Claim 26 is patentable over *Ghai*, *Galles*, *Madonna*, and *Bartholomew*, whether the references are taken alone or in combination. There is no motivation for the combination of these four disparate references.

The Examiner rejects Claim 26 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai* in view *Galles*, *Madonna*, and *Bartholomew*. Appellant's independent Claim 26 recites:

A synchronous switch for a telecommunications node, comprising:

a time slot interchanger (TSI) operable to switch traffic between time slots for a plurality of line cards;

an instruction memory for the TSI, the instruction memory comprising a plurality of instruction sets, each

instruction set including a plurality of instructions operable to be provided to the TSI to switch time slots of an associated line card:

a redirection memory operable to selectively associate each instruction set of the instruction memory with a disparate one of the line cards; and

a controller operable to reprogram the redirection memory to change associations of the instruction sets with the line cards.

Ghai, Galles, Madonna, and Bartholomew, whether taken alone or in combination, fail to teach or suggest every element of this Claim.

Among other aspects of Claim 26, the *Ghai-Galles-Madonna-Bartholomew* combination fails to teach or suggest "a controller operable to reprogram the redirection memory to change associations of the instruction sets with the line cards." As teaching this element, the Examiner states that "Galles teaches a controller to reprogram the redirection memory in the event of a fault occurring." *Final Office Action*, page 9. Appellant respectfully disagrees. The portions of *Galles* that the Examiner cites do not support this statement, since these portions address determining "new routes" and "alternative paths" around faults between nodes on a network. *Galles*, col. 11, lines 55-65; col. 21, line 64- col. 22, line 6. Determining new routes and alternative paths around faults between nodes on a network fails to teach or suggest "a controller operable to reprogram the redirection memory to change associations of the instruction sets with the line cards." Furthermore, *Ghai*, *Madonna*, and *Bartholomew* fail to provide this missing element.

In addition, there is no teaching, suggestion, or motivation to combine or modify *Ghai*, *Galles*, *Madonna*, and *Bartholomew* either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Here again, by picking and choosing elements from four different references without evidence supporting the combination, it appears that the Examiner has improperly used the inventor's disclosure as a blueprint for piecing together the references, the essence of hindsight reconstruction.

For at least these reasons, Appellant requests the Board to reverse the rejection and instruct the Examiner to allow Claim 26.

# IV. Claim 27 is patentable over Ghai, Galles, Madonna, Bartholomew, and Gerstel, whether the references are taken alone or in combination. There is no motivation for the combination of these five disparate references.

The Examiner rejects Claim 27 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai, Galles, Madonna*, and *Bartholomew* in view of *Gerstel*. Claim 27 depends from Claim 26, which is shown above to be allowable over *Ghai* in view of *Galles, Madonna*, and *Bartholomew*. The introduction of *Gerstel* fails to provide the elements of Appellant's Claim 26 not shown by *Ghai* in view of *Galles, Madonna*, and *Bartholomew*.

In addition, there is no teaching, suggestion, or motivation to combine or modify *Ghai*, *Galles*, *Madonna*, *Bartholomew*, and *Gerstel* either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. By picking and choosing elements from five different references without evidence supporting the combination, it appears that the Examiner has improperly used the inventor's disclosure as a blueprint for piecing together the references, the essence of hindsight reconstruction.

Thus, for at least these reasons, Appellant requests the Board to reverse the rejection and instruct the Examiner to allow Claim 27.

# V. Claim 38 is patentable over Ghai, Gerstel, Pomp, Madonna, and Bartholomew, whether the references are taken alone or in combination. There is no motivation for the combination of these five disparate references.

The Examiner rejects Claim 38 under 35 U.S.C. § 103(a) as being unpatentable over *Ghai* in view of *Gerstel*, *Pomp*, *Madonna*, and *Bartholomew*. Appellant's independent Claim 38 recites:

A method for associating routing parameters for a switch with line cards serviced by the switch, comprising:

programming a redirection memory to associate a routing parameter set in a routing memory for a switch with a first line card, the routing parameter set including a plurality of routing parameters to be provided to the switch to service the first line card;

in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card; programming the redirection memory to associate a second routing parameter set in the routing memory with the second line card, the second routing parameter set including a plurality of second routing parameters to be provided to the switch to service the second line card; and

in response to the event initiating activation of the second line card in place of the first line card, reprogramming the redirection memory to associate the second routing parameter set with the first line card, the second routing parameters to be provided to the switch to service the first line card;

wherein the event is a failure of the first line card, the routing parameters comprise instructions, the routing parameter set comprises an instruction set, the routing memory comprises an instruction memory, the switch comprises a synchronous switch, the synchronous switch is a time slot interchanger (TSI), and the redirection memory comprises a programmable table storing associations between line cards serviced by the switch and the routing parameter sets in the routing memory for the switch.

Ghai, Gerstel, Pomp, Madonna, and Bartholomew, whether taken alone or in combination, fail to teach or suggest every element of this Claim.

Among other aspects of Claim 38, the *Ghai-Gerstel-Pomp-Madonna-Bartholomew* combination fails to teach or suggest:

in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card;

and

in response to the event initiating activation of the second line card in place of the first line card, reprogramming the redirection memory to associate the second routing parameter set with the first line card, the second routing parameters to be provided to the switch to service the first line card.

The Examiner admits that *Ghai* fails to teach the recited elements. *Final Office Action*, page 12. The Examiner thus attempts to combine aspects of *Gerstel* and *Pomp* to produce the recited elements.

Here as with respect to Claim 13, the Examiner states that *Gerstel* "teaches an event initiating activation of a second line card in place of the first line card." *Final Office Action*, page 12. However, as discussed above, *Gerstel* proposes hardwiring various ports of

different line cards together to solve the problem of failed line cards. *Gerstel*, col. 3, lines 4-42. Hardwiring ports of different line cards together to solve the problem of failed line cards fails to teach or suggest "in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card." Furthermore, hardwiring ports of different line cards together to solve the problem of failed line cards also fails to teach or suggest "in response to the event initiating activation of the second line card in place of the first line card, reprogramming the redirection memory to associate the second routing parameter set with the first line card, the second routing parameters to be provided to the switch to service the first line card." In particular, hardwiring ports of different line cards together fails to teach or suggest "reprogramming the redirection memory."

In an attempt to cure the deficiencies of *Gerstel*, the Examiner once again introduces *Pomp* and states:

Pomp discloses a switchable network unit which permits automatic activation and configuration of different line cards, i.e. [sic] second line card, by the controller, which in turn causes provisioning data to be loaded to provide the necessary information the controller needs to route data to this new, i.e. [sic] second, line card.

Final Office Action, page 12. However, the Examiner's summary of Pomp again highlights that reference's deficiencies.

As discussed above, *Pomp* discloses that when a customer activates an additional telephone line, an operations control center supplies two things to a controller in a switchable optical network unit: instructions and provisioning data. *Pomp*, col. 15, lines 38-41. The instructions identify an available line card and cause the controller to activate that line card. *Id.*, col. 15, lines 41-43. The provisioning data includes routing information that the controller needs to route signals to and from the newly activated line card. *See Pomp*, col. 15, lines 42-48. Thus in *Pomp*, when a new line card is activated, the controller loads an entirely new set of routing information. However, loading an entirely new set of routing information when a new line card is activated fails to teach or suggest "in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second

line card." Furthermore, loading an entirely new set of routing information when a new line card is activated also altogether fails to teach or suggest "in response to the event initiating activation of the second line card in place of the first line card, reprogramming the redirection memory to associate the second routing parameter set with the first line card, the second routing parameters to be provided to the switch to service the first line card."

In addition, there is no teaching, suggestion, or motivation to combine or modify Ghai, Gerstel, Pomp, Madonna, and Bartholomew either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. As discussed above, there is no teaching, suggestion, or motivation to combine or modify Ghai, Gerstel, and Pomp. Madonna and Bartholomew fail to provide any teaching, suggestion, or motivation for the combination. Also, the Examiner has failed to point to any evidence supporting the combination of five references. Here again, by picking and choosing elements from five different references without evidence supporting the combination, it appears that the Examiner has improperly used the inventor's disclosure as a blueprint for piecing together the references, the essence of hindsight reconstruction.

For at least these reasons, Appellant requests the Board to reverse the rejection and instruct the Examiner to allow Claim 38.

### Conclusion

Appellant has demonstrated that the present invention, as claimed in Claims 13-38, is patentably distinct from the cited art. Accordingly, Appellant requests that the Board reverse the final rejection and instruct the Examiner to issue a Notice of Allowance of Claims 13-38.

Appellant encloses a check in the amount of \$500.00 to cover the fee. The Commissioner is hereby authorized to charge any extra fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

BAKER BOTTS, L.L.P. Attorneys for Appellant

Kurt M. Pankratz

Registration No. 46,977

Date: March 14, 2005

Customer No. 05073

### Appendix A - Claims Involved In Appeal

13. (Previously Presented) A method for associating routing parameters for a switch with line cards serviced by the switch, comprising:

programming a redirection memory to associate a routing parameter set in a routing memory for a switch with a first line card, the routing parameter set including a plurality of routing parameters to be provided to the switch to service the first line card; and

in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card.

- 14. (Original) The method of Claim 13, wherein the event is a failure of the first line card.
  - 15. (Previously Presented) The method of Claim 13, further comprising:

programming the redirection memory to associate a second routing parameter set in the routing memory with the second line card, the second routing parameter set including a plurality of second routing parameters to be provided to the switch to service the second line card; and

in response to the event initiating activation of the second line card in place of the first line card, reprogramming the redirection memory to associate the second routing parameter set with the first line card, the second routing parameters to be provided to the switch to service the first line card.

16. (Original) The method of Claim 13, wherein the routing parameters comprise instructions, the routing parameter set comprises an instruction set and the routing memory comprises an instruction memory.

- 17. (Original) The method of Claim 16, wherein the switch comprises a synchronous switch.
- 18. (Original) The method of Claim 17, wherein the synchronous switch is a time slot interchanger (TSI).
- 19. (Original) The method of Claim 13, wherein the redirection memory comprises a programmable table storing associations between line cards serviced by the switch and the routing parameter sets in the routing memory for the switch.
- 20. (Previously Presented) A system for associating routing parameters for a switch with line cards serviced by the switch, comprising:

a computer-readable medium; and

software stored on the computer-readable medium, the software operable to initially associate a routing parameter set in a router memory for a switch with a first line card, the routing parameter set including a plurality of routing parameters to be provided to the switch to service the first line card, and, in response to an event initiating activation of a second line card in place of the first line card, to reassociate the routing parameter set with a second line card, the routing parameters to be provided to the switch to service the second line card.

- 21. (Original) The system of Claim 20, wherein the event comprises failure of the first line card.
- 22. (Previously Presented) The system of Claim 20, the software further operable to initially associate a second routing parameter set in the router memory with the second line card, the second routing parameter set including a plurality of second routing parameters to be provided to the switch to service the second line card, and, in response to the event, to reassociate the second routing parameter set with the first line card, the second routing parameters to be provided to the switch to service the first line card.

- 23. (Original) The system of Claim 20, wherein the routing parameters comprise instructions, the routing parameter set comprises an instruction set and the routing memory comprises an instruction memory.
- 24. (Original) The system of Claim 23, wherein the switch comprises a synchronous switch.
- 25. (Original) The system of Claim 24, wherein the synchronous switch is a time slot interchanger (TSI).
- 26. (Original) A synchronous switch for a telecommunications node, comprising: a time slot interchanger (TSI) operable to switch traffic between time slots for a plurality of line cards;

an instruction memory for the TSI, the instruction memory comprising a plurality of instruction sets, each instruction set including a plurality of instructions operable to be provided to the TSI to switch time slots of an associated line card;

a redirection memory operable to selectively associate each instruction set of the instruction memory with a disparate one of the line cards; and

a controller operable to reprogram the redirection memory to change associations of the instruction sets with the line cards.

27. (Original) The synchronous switch of Claim 26 further comprising:

the redirection memory programmed to associate a first instruction set with a working line card and a second instruction set with a protect line card; and

the controller operable to reprogram the redirection memory to associate the first instruction set with the protect line card and the second instruction set with the working line card in response to failure of the first line card and activation of the second line card in place of the first line card.

28. (Previously Presented) A system for associating routing parameters for a switch with line cards serviced by the switch, comprising:

means for programming a redirection memory to associate a routing parameter set in a routing memory for a switch with a first line card, the routing parameter set including a plurality of parameters to be provided to the switch to service the first line card; and

means for reprogramming the redirection memory to associate the routing parameter set in the routing memory with a second line card in response to an event initiating activation of the second line card in place of the first line card, the parameters to be provided to the switch to service the second line card.

- 29. (Original) The system of Claim 28, wherein the event is a failure of a first line card.
  - 30. (Previously Presented) The system of Claim 28, further comprising:

means for programming the redirection memory to associate a second routing parameter set in the routing memory with the second line card, the second routing parameter set including a plurality of second routing parameters to be provided to the switch to service the second line card; and

means for reprogramming the redirection memory to associate the second routing parameter set with the first line card in response to the event initiating activation of the second line card in place of the first line card, the second routing parameters to be provided to the switch to service the first line card.

31. (Previously Presented) Logic for associating routing parameters for a switch with line cards serviced by the switch, the logic encoded in media and operable when executed to perform the steps of:

programming a redirection memory to associate a routing parameter set in a routing memory for a switch with a first line card, the routing parameter set including a plurality of routing parameters to be provided to the switch to service the first line card; and

in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card.

- 32. (Previously Presented) The logic of Claim 31, wherein the event is a failure of the first line card.
- 33. (Previously Presented) The logic of Claim 31, further operable when executed to perform the steps of:

programming the redirection memory to associate a second routing parameter set in the routing memory with the second line card, the second routing parameter set including a plurality of second routing parameters to be provided to the switch to service the second line card; and

in response to the event initiating activation of the second line card in place of the first line card, reprogramming the redirection memory to associate the second routing parameter set with the first line card, the second routing parameters to be provided to the switch to service the first line card.

34. (Previously Presented) The logic of Claim 31, wherein the routing parameters comprise instructions, the routing parameter set comprises an instruction set and the routing memory comprises an instruction memory.

- 35. (Previously Presented) The logic of Claim 34, wherein the switch comprises a synchronous switch.
- 36. (Previously Presented) The logic of Claim 35, wherein the synchronous switch is a time slot interchanger (TSI).
- 37. (Previously Presented) The logic of Claim 31, wherein the redirection memory comprises a programmable table storing associations between line cards serviced by the switch and the routing parameter sets in the routing memory for the switch.

38. (Previously Presented) A method for associating routing parameters for a switch with line cards serviced by the switch, comprising:

programming a redirection memory to associate a routing parameter set in a routing memory for a switch with a first line card, the routing parameter set including a plurality of routing parameters to be provided to the switch to service the first line card;

in response to an event initiating activation of a second line card in place of the first line card, reprogramming the redirection memory to associate the routing parameter set in the routing memory with the second line card, the routing parameters to be provided to the switch to service the second line card;

programming the redirection memory to associate a second routing parameter set in the routing memory with the second line card, the second routing parameter set including a plurality of second routing parameters to be provided to the switch to service the second line card; and

in response to the event initiating activation of the second line card in place of the first line card, reprogramming the redirection memory to associate the second routing parameter set with the first line card, the second routing parameters to be provided to the switch to service the first line card;

wherein the event is a failure of the first line card, the routing parameters comprise instructions, the routing parameter set comprises an instruction set, the routing memory comprises an instruction memory, the switch comprises a synchronous switch, the synchronous switch is a time slot interchanger (TSI), and the redirection memory comprises a programmable table storing associations between line cards serviced by the switch and the routing parameter sets in the routing memory for the switch.

## Appendix B: Evidence

NONE

**Appendix C: Related Proceedings** 

NONE